**AIM AND OBJECTIVES**

To evaluate preoperative and 12-month post-operative Urodynamics (UDS) in a multi-institutional setting with extensive subjective and objective patient outcome measures.

To determine if changes in UDS parameters:

1) Differ between retropubic (RMUS) and transobturator (TMUS) midurethral sling procedures

2) Are associated with successful treatment outcome. If an association exists, then to further elucidate the MOA of the MUS.

**MATERIALS AND METHODS**

Trial of Midurethral Slings (TOMUS) was a multicenter, randomized equivalence trial comparing outcomes with RMUS and TMUS conducted at 9 clinical sites through the Urinary Incontinence Treatment Network (UITN) with IRB approval at all sites.

597 women with predominant stress urinary incontinence (SUI) randomized to RMUS or TMUS and underwent standardized UDS before and 12 months after surgery. Retreatment for SUI prompted 12 month assessment battery prior to initiation of retreatment.

Inclusion criteria included self-reported SUI, pure or predominant SUI on the MESA questionnaire, positive CST. Postoperative evaluations were performed at 2 and 6 weeks, and 6, 12 and 24 months with primary outcomes determined at 12 months.

Objective Success
- negative stress test at 300cc bladder volume
- negative 24 hour pad test
- no retreatment

Subjective Success
- self-reported absence of symptoms
- no leakage recorded on voiding diary
- no retreatment

Standardized UDS and interpretation guidelines based on ICS Good Urodynamics Practice Guidelines. Surgeon remained blinded to UDS results unless needed for treatment of postoperative symptoms.

Data reported for women with analyzable UDS at both time points and known outcome status. Linear models fit to predict change in UDS measures from pre to post surgery. Chi-square tests used to assess differences by treatment group for DO.

**RESULTS**

**Table 1: Comparison Changes in NIF with Mean and SD after SUI Surgery by Treatments**

**Table 2: Comparison of Changes in CMG and UPP with Mean and SD after SUI Surgery by Treatments**

**Table 3: Comparison of Changes in PFS with Mean and SD after SUI Surgery by Treatments**

**CONCLUSIONS**

- UDS changes similar in RMUS and TMUS
- No significant change in MUCP after MUS despite proven efficacy
- Is MUS efficacy not reliant on MUCP changes, or is MUCP incapable of detecting changes induced by MUS?
- Flow rates lower at 12 months in both TMUS & RMUS
- Increased Pdet@Qmax in both RMUS and TMUS by 3-5 cm H2O
- No UDS changes associated with subjective or objective outcomes.
- These findings suggest MUS not as “obstructive” as PVS. UDS changes are not related to treatment outcomes after MUS as they were after Burch and PVS.